



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,436	02/06/2004	Koichi Shibata	018987-055	6119
21839 7590 04/12/2010 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404				
EXAMINER				
MILLA, MARK R				
ART UNIT		PAPER NUMBER		
2625				
NOTIFICATION DATE		DELIVERY MODE		
04/12/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com
offserv@bipc.com

Office Action Summary

Application No.

10/772,436

Applicant(s)

SHIBATA ET AL.

Examiner

Mark R. Milia

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/200)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 12/29/09 and has been entered and made of record. Currently, claims 1-23 are pending.

Response to Arguments

2. Applicant's arguments filed 12/29/09 have been fully considered but they are not persuasive.

The applicant asserts that Mihira (US 2004/0070782) does not teach or suggest wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API. The Examiner respectfully disagrees as Mihira does teach, or at the very least suggest, such a feature. Particularly, Mihira discloses a web service function (WSF **27**) with an API through which processing requests can be received from web page application **25** or SOAP communication application **26**, modules **25-28** are equivalent to the claims second control program (paragraph 60-61). The SOAP communication application is a data access protocol that is utilized by a network apparatus **100** to request processing from the composite machine **1**, for such things as printing of a document (paragraphs 89-90). The network apparatus **100** performs

communication using XML with the SOAP **26** which then sends the request to the WSF **27** via API **51** and the WSF **27** sends the request to SF **28** via API **52** and the SF **28** then sends the necessary information and appropriate instructions for processing to the corresponding control service layer **31-38** via API **53** for execution, such as printing of a selected document. Mihira states that the API's execute through functions previously defined and that communication between network apparatus **100** and composite machine **1** can take place via the Internet (paragraphs 61 and 85). Therefore, commands, parameters, and syntax for controlling the hardware resource were released to the public for incorporation by external users supported by the second API.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-23 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent Application Publication No. 2004/0070782 to Mihira.

Claims 1, 7, 13, and 18 set forth three different hierarchical architectures for the hardware resource, a first control program, a second control program, and an application program. However, Mihira discloses only one hierarchical architecture but Mihira does state that variations and modifications can be made without departing from the scope of the invention (paragraph 212) and it is common in the art to rearrange

processing parts without changing the overall function of the system. This is the case with the instant invention in that Mihira discloses a hierarchical architecture that serves the same purpose and functions the same as the hierarchical architectures of claims 1, 7, and 13.

Regarding claim 1, Mihira discloses an image processing apparatus comprising: a hardware resource that includes at least one of an image forming unit, a read unit, and a display unit (see Fig. 1 and paragraph 58), a first control program (see Fig. 1 and paragraph 63-64, control service layer **9**), a second control program (see Fig. 1 and paragraph 61-62, applications **25-27**), and an application program (see Fig. 1 and paragraph 60, applications **21-24**), wherein the hardware resource and the programs are arranged in such a hierarchical architecture that the first control program is superordinate to the hardware resource, and the application program and the second control program are superordinate to the first control program (see Fig. 1), the first control program includes a first API (application program interface) for receiving, with use of a predefined function, a first request relating to image processing from the second control program and a second request relating to image processing from the application program, and controls, on receiving either of the first and second requests, the hardware resource to perform image processing based on the received request (see paragraphs 59-63, 65, 71, and 89-91, a host computer can request document printing through communication with document management service **123** which is SF **28** and the control service layer **9** interprets processing requests sent from the application layer **5**, of which WEB page application **25**, SOAP communication application **26**, WSF **27**,

and SFs **28** are a part of, thus, the second control program (any of WEB page application **25**, SOAP communication application **26**, WSF **27**, and SFs **28**) passes received processing requests to the first control program (any of control service layer **9**) as control service layer **9** is responsible for management and performance of the hardware resources), and the second control program includes a second API for receiving, a third request relating to image processing from an external source, converts the received third request to a command supported by the first API, and passes the command as the first request to the first control program (see paragraphs 60-61, 66-67, 85, and 89-91, the API is publicly released because a network apparatus, such as a host computer receives a list of stored documents and can transmit XML data using a SOAP protocol to perform printing of a stored document, therefore the API **51** is publicly released prior to the host computer requesting document printing and thereby allows document printing requests via document management service **123**), wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API (see paragraphs 61, 85, and 89-93, network apparatus **100** performs communication using XML with the SOAP **26** which then sends the request to the WSF **27** via API **51** and the WSF **27** sends the request to SF **28** via API **52** and the SF **28** then sends the necessary information and appropriate instructions for processing to the corresponding control service layer **31-38** via API **53** for execution, such as printing of a selected document, Mihira states that the API's execute through functions previously

defined and that communication between network apparatus **100** and composite machine **1** can take place via the Internet).

Regarding claim 7, Mihira discloses an image processing apparatus comprising: a hardware resource that includes at least one of an image forming unit, a read unit, and a display unit (see Fig. 1 and paragraph 58), a first control program (see Fig. 1 and paragraph 63-64, control service layer **9**), a second control program (see Fig. 1 and paragraph 61-62, applications **25-27**), and an application program (see Fig. 1 and paragraph 60, applications **21-24**), wherein the hardware resource and the programs are arranged in a hierarchical architecture in the stated order (see Fig. 1), the first control program includes a first API for receiving, with use of a predefined function, a first request relating to image processing from the second control program, and controls the hardware resource to perform image processing based on the received first request (see paragraphs 59-63, 65, and 71), and the second control program includes a second API for receiving, a second request relating to image processing from an external source and a third request relating to image processing from the application program, converts, on receiving either of the second and third requests, the received request to a command supported by the first API, and passes the command as the first request to the first control program (see paragraphs 60-61, 66-67, 85, and 89-91, the API is publicly released because a network apparatus, such as a host computer receives a list of stored documents and can transmit XML data using a SOAP protocol to perform printing of a stored document, therefore the API **51** is publicly released prior to the host computer requesting document printing and thereby allows document printing requests

via document management service **123**), wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API (see paragraphs 61, 85, and 89-93, network apparatus **100** performs communication using XML with the SOAP **26** which then sends the request to the WSF **27** via API **51** and the WSF **27** sends the request to SF **28** via API **52** and the SF **28** then sends the necessary information and appropriate instructions for processing to the corresponding control service layer **31-38** via API **53** for execution, such as printing of a selected document, Mihira states that the API's execute through functions previously defined and that communication between network apparatus **100** and composite machine **1** can take place via the Internet).

Regarding claim 13, Mihira discloses an image processing apparatus comprising: a hardware resource that includes at least one of an image forming unit, a read unit, and a display unit (see Fig. 1 and paragraph 58), a first control program (see Fig. 1 and paragraph 59), a second control program (see Fig. 1 and paragraph 61), and Fig. 1 and paragraph 63-64, control service layer **9**), a second control program (see Fig. 1 and paragraph 61-62, applications **25-27**), and an application program (see Fig. 1 and paragraph 60, applications **21-24**), wherein the first control program is arranged between the hardware resource and the application program and the second control program is arranged superordinate to the application program in a hierarchical architecture (see Fig. 1), the first control program includes a first API for receiving, with use of a predefined function, a first request relating to image processing from the second control program and a second request relating to image processing from the

application program, and controls, on receiving either of the first and second requests, the hardware resource to perform image processing based on the received request (see paragraphs 59-63, 65, and 71), the second control program includes a second API for receiving, a third request relating to image processing from an external source, converts the received third request to a command supported by the first API, and passes the command to an appropriate one of the first control program and the application program depending on the requested processing, the command passed to the first control program serving as the first request (see paragraphs 60-61, 66-67, 85, and 89-91, the API is publicly released because a network apparatus, such as a host computer receives a list of stored documents and can transmit XML data using a SOAP protocol to perform printing of a stored document, therefore the API 51 is publicly released prior to the host computer requesting document printing and thereby allows document printing requests via document management service 123), and on receiving the command from the second control program, the application program passes to the first control program, a request for performing the processing based on the received command, the request passed to the first control program serving as the second request (see paragraphs 58-63, 65-67, 71, 85, and 89-91, a host computer can request document printing through communication with document management service 123 which is SF 28 and the control service layer 9 interprets processing requests sent from the application layer 5, of which WEB page application 25, SOAP communication application 26, WSF 27, and SFs 28 are a part of, thus, the second control program (any of WEB page application 25, SOAP communication application 26, WSF 27, and

SFs **28**) passes received processing requests to the first control program (any of control service layer **9**) as control service layer **9** is responsible for management and performance of the hardware resources), wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API (see paragraphs 61, 85, and 89-93, network apparatus **100** performs communication using XML with the SOAP **26** which then sends the request to the WSF **27** via API **51** and the WSF **27** sends the request to SF **28** via API **52** and the SF **28** then sends the necessary information and appropriate instructions for processing to the corresponding control service layer **31-38** via API **53** for execution, such as printing of a selected document, Mihira states that the API's execute through functions previously defined and that communication between network apparatus **100** and composite machine **1** can take place via the Internet).

Regarding claim 18, Mihira discloses an image processing apparatus comprising: a hardware resource that includes at least one of an image forming unit, a read unit, and a display unit (see Fig. 1 and paragraph 58), a first control program (see Fig. 1 and paragraph 63-64, control service layer **9**), a second control program (see Fig. 1 and paragraph 61-62, applications **25-27**), and one or more application programs (see Fig. 1 and paragraph 60, applications **21-24**), wherein the hardware resource and the programs are arranged in such a hierarchical architecture that the first control program is superordinate to the hardware resource, and the application program and the second control program are superordinate to the first control program (see Fig. 1), the first control program includes a first API (application program interface) for receiving a first

request relating to image processing from the second control program and a second request relating to image processing from the one or more application programs, and controls, on receiving either of the first and second requests, the hardware resource to perform image processing based on the received request (see paragraphs 59-63, 65, and 71), and the second control program includes a second API for receiving, a third request relating to image processing from an external source, converts the received third request to a command supported by the first API, and passes the command as the first request to the first control program, wherein the publicly released function is not supported by any of the one or more application programs (see paragraphs 60-61, 66-67, 85, and 89-91, the API is publicly released because a network apparatus, such as a host computer receives a list of stored documents and can transmit XML data using a SOAP protocol to perform printing of a stored document, therefore the API 51 is publicly released prior to the host computer requesting document printing and thereby allows document printing requests via document management service 123), wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API (see paragraphs 61, 85, and 89-93, network apparatus 100 performs communication using XML with the SOAP 26 which then sends the request to the WSF 27 via API 51 and the WSF 27 sends the request to SF 28 via API 52 and the SF 28 then sends the necessary information and appropriate instructions for processing to the corresponding control service layer 31-38 via API 53 for execution, such as printing of a selected document, Mihira states that the API's execute through functions previously

defined and that communication between network apparatus **100** and composite machine **1** can take place via the Internet).

Regarding claim 2, Mihira further discloses wherein the first control program passes the received first request to the application program if the first request is directed to the application program (see paragraphs 58-60 and 63).

Regarding claims 3 and 14, Mihira further discloses wherein the third request is data expressed in an XML (see paragraph 90).

Regarding claims 4, 10, and 15, Mihira further discloses wherein the second control program further includes: a first converting unit for extracting predetermined information from the received XML data (see paragraphs 66-67 and 90) and a second converting unit for converting the extracted information to the command supported by the first API (see paragraphs 97-99 and 102-103).

Regarding claims 5, 11, and 16, Mihira further discloses wherein the hardware resource includes the image forming unit (see Fig. 1 **11**), the requests relate to execution of a print job (see paragraphs 89-90), and on receiving a request relating to execution of the print job, the first control program controls the image forming unit to perform the print job (see paragraphs 97-99 and 102-103).

Regarding claims 6, 12, and 17, Mihira further discloses wherein the hardware resource includes the read unit (see Fig. 1 **12**), the requests relate to execution of a scan job, and on receiving a request relating to execution of the scan job, the first control program controls the read unit to perform the scan job (see paragraphs 58-60, 63, 65, 69, 71, and 80).

Regarding claim 8, Mihira further discloses wherein the second control program passes the received second request to the application program if the second request is directed to the application program (see paragraphs 58-60 and 63).

Regarding claim 9, Mihira further discloses wherein the second request is data expressed in an XML (see paragraph 90).

Regarding claim 19, Mihira further discloses wherein the second API is an external API for controlling operations of the hardware resource according to requests received from an external device (see paragraphs 62 and 89-90).

Regarding claims 20-23, Mihira further discloses wherein the second API is a collection of sets of functions that are predefined by the first control program that are defined by a single collective function (see paragraphs 61, 97-99, and 105, utilizing API 52 a request for processing is either sent to one SF 28 or the other SF 28 for document management service 123 or printing service 130, the function is previously defined by the first control program, which is control service layer 9 as this is the layer that will receive the information to control the processing of the hardware resources).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (571)272-7408. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached at (571) 272-7437. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark R. Milia

Application/Control Number: 10/772,436
Art Unit: 2625

Page 14

Examiner
Art Unit 2625

/Mark R. Milia/
Examiner, Art Unit 2625

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625